interacts with the cell membrane of said cell or a component within said cell membrane in vitro whereby the substance comprising said nucleic acid is taken up by the cell via the inherent transport mechanism of the cell.

4. (Amended) A method according to claim 3, wherein said substance comprises a single or double stranded, linear or circular DNA.

- 5. (Amended) A method according to claim 1, wherein said substance comprises a single or double stranded RNA.
- 6. (Amended) A method according to claim 1, wherein said substance is a fusion molecule comprising a nucleic acid part and a protein part.
- 7. (Amended) A method according to any claim 1, wherein said substance is an expression vector containing specific cDNA.
- 9. (Amended) A method according to claim 1, wherein said substance gives rise to a detectable signal.
- 13. (Amended) A method according to claim 11, wherein said detectable signal is due to a radioactively tagged nucleic acid.

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- 14. (Amended) A method according to claim 1, wherein said cell is a cell in a tissue or cell culture.
- 15. (Amended) A method for identification of progenitor cells and/or stem cells comprising using the method according to claim 1.
- 16. (Amended) The method according to claim 15, wherein said cells after identification are isolated from surrounding cells of other types.
- 17. (Amended) A method for gene therapy comprising using the method according to claim 1.
- 18. (Amended) The method according to claim 6, wherein said protein part comprises a pharmaceutically active protein.
- 19. (Amended) A method for propagation of neural cells comprising using the method according to claim 8.
- 20. (Amended) The method according to claim 18, wherein said propagated neural cells are suitable for transplantation to patients.

- 21. (Amended) A method for detection of a medicinal product comprising cDNA containing expression plasmids comprising using the method according to claim 1.
- 22. (Amended) A method for diagnostic purposes comprising using the method according to claim 1.
- 23. (Amended) The method according to claim 8, wherein said protein or detectable signal allows for testing or screening of aforementioned protein or signal.
- 24. (Amended) A method for introducing a substance comprising a nucleic acid into a mammalian neural stem cell or progenitor cell, wherein said nucleic acid directly interacts with the cell membrane of said cell or a component within said cell membrane in vivo, whereby the substance comprising said nucleic acid is taken up by the cell via the inherent transport mechanism of the cell.
- 26. (Amended) A method according to claim 24, wherein said substance comprises a single or double stranded, linear or circular DNA.
- 27. (Amended) A method according to claim 24, wherein said substance comprises a single or double stranded RNA.

- 36. (Amended) A method according to claim 1, wherein said cell is a cell in the central nervous system of a patient.
- 37. (Amended) A method for identification of progenitor cells and/or stem cells comprising using the method according to claim 24.
- 38. (Amended) The method according to claim 37, wherein said cells after identification are isolated from surrounding cells of other types.
- 39. (Amended) A method for gene therapy comprising using the method according to claim 24.
- 40. (Amended) A method according to claim 28, wherein said protein part comprises a pharmaceutically active protein.
- 41. (Amended) A method for propagation of neural cells comprising using the method according to claim 30.
- 42. (Amended) A method for detection of a medicinal product comprising cDNA containing expression plasmids comprising using the method according to claim 24.